Scanned Image Data of Rare Materials for the Kyoto University Digital Library(説明資料)

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1. Introduction

The objective of the Kyoto University Digital Library is to provide a system that informs those who access it of the entirety of Kyoto University holdings. Between March 1998 and January 2000, users from a total of 373,586 external nodes visited our Digital Library, with a daily average of 551 external nodes that connected to it. Access from outside Japan accounts for 10 percent of the total use.

The crucial content part of this Digital Library rests on image data of incunabula titles, including those designated as Japanese national treasures, held by Kyoto University.

2. Currently Available Data of Rare Materials

The Digital Library currently makes available through the Internet to the general public at no cost at any time data of the following rare materials. Most of them consist of scanned image data alone; however, some also accompany corresponding text-encoded data.

Please refer to http://ddb.libnet.kulib.kyoto-u.ac.jp/exhibit/index.html for further details.

#National treasure: Konjaku monogatarishu (Suzuka-bon) 553 images

#Important cultural properties: Man'yoshu (Amagasaki-bon), Norikuniki, Hyohanki, etc. 29 volumes, 7,126 images

#Rare books: Special collection of the Meiji restoration, Materials of the native mathematics of Japan, Fujikawa-bon (Japanese traditional medicine), Genji monogatari, Gikeiki, Tensho Ken'o Shisetsu shozoga, etc. over 400 volumes, approximately 70,000 images

#Other incunabula not designated as rare materials: Hogen monogatari, Heiji monogatari, etc. 10 volumes, 849 images

The repository size of the above together with those in preparation and in the production queue is expected to exceed the mark of 140,000 images this year.

3. History of Kyoto University Digital Library

The process of reaching the current stage of storing and disseminating a considerable volume of image data of rare materials has witnessed the following series of groundbreaking events.

In 1994, we held electronic exhibition "Yoshida Shoin and His Associates," which was made possible through application of an experimental digital library system called Ariadne. Ariadne was an experimental system developed by Digital Library Research Group chaired by Professor Makoto Nagao, now President of Kyoto University.

In 1995, on the occasion of the University Library's Web site establishment, we made it a publicly accessible feature item of interest a scanned image of reproduction book Kunijo kabuki ekotoba.

In 1996, grant-in-aid funds received from the Japanese Ministry of Education, Science, Sports, and Culture enabled us to digitize a large number of titles.

In 1997, we created Digital Information Section to be in charge of the digital library.

In 1998, the electronic library system, ilisminds from Fujitsu, was introduced and placed in production-mode operation.

4. Digitization Process

The Digital Information Section makes recommendations as to selection of materials to be digitized. Final decisions are made by the Special Committee on Digital Library, composed of faculty representatives from all academic departments and some research institutes within Kyoto University. Actual production work, that is from photographing of the originals to HTML file generation, is all outsourced to an external vendor. At our Library, we upload the completed data files to the server and establish necessary hyperlinks from within the index page. At the same time, we evidently check accuracy and quality of image data; and, if needed, we bounce back to the vendor files containing mistakes or image of substandard quality. Such quality inspection work is assigned to graduate student assistants majoring in literature. A procedural outline follows.

#Photographing of the originals - Optical cameras for 35 mm color microfilms are used. 4 x 5 in. color reversal films are also used for refined pieces such as illustrations.

#Scanning; Generation of Preservation master Images = ProPhoto CD 16Base Scanned at resolution of approximately 2,000 dpi

#Production of JPEG Images for Internet Access - 2 sizes: thumbnail images (516 x 768 pixels) and full scale images (1,024 x 1,536 pixels)

#Production of HTML Files

5. Actual use

Little is known as to what use each patron is making of these image data. We are aware of some faculty members of Japanese literature who distribute print-outs of these images for their instruction. An unexpected finding based on user input through mail and our transaction log analysis is rather high use by those outside the research community. Since the majority of these rare titles are Japanese classical literature pieces and primary historical sources, we did not originally anticipate such a high volume of use.

It is speculated that many users gain access to those electronic image data for one's leisure and research. We have at this time no knowledge of piracy cases of illegal commercial distribution.

6. Future Prospects

We plan to continue with this digitization project of rare titles, as long as our funds permit. Currently, the method of access is sequential consultation of those images; however, we wonder what value-added services may be provided in a meaningful way. Some images do accompany corresponding text-encoded data. Should this approach be applied to other image data? How about translation texts into modern Japanese? The general public appears to appreciate such additional services. Nevertheless, researchers believe that scanned image data alone would be sufficient.

With regard to scrolls, we are currently presenting images in a segment-by-segment fashion. But, an argument may very well be made for display in scroll-like representation. We are already making available on an experimental basis "Tamamo no mae" in a scroll-like format.

Another point of consideration is declaration of our copyright. Image data files are generated one after another for release to the general public, on which we have confidence and pride. However, we recognize the need to take concrete and effective measures against illegitimate use. At the present time, we place on the bottom side of each image page the copyright statement "Kyoto University Library"; and we are in the process of exploring the possibility of electronic watermarks.

7. Conclusion

Digitization of rare materials for scanned image data presentation to the general public through the Internet is an effective means to satisfy seemingly contradicting missions of preservation and access provision. At the same time, through release of those image data files, more and more requests are received for actual viewing of the originals. What should we do? Some advocate for transferring of these originals to museums, as long as those are not for actual use. On the other hand, we have the obligation of transmitting in as much as original a form as possible the cultural patrimony to those following us. We are in a great quandary.

I mentioned earlier our self-confidence and pride with which we are engaged in this digitization and dissemination project of rare materials. On the other hand, we always face the question as to whether or not those image data are of actual utility and whether or not the project is worth the large sum of funds currently allocated. We also suspect that the urgent needs of Japanese studies researchers residing outside Japan rest rather on the most up-to-date articles and materials. I would very much welcome your input on this.

Thank you very much for your attention.